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File Code: 2230
Date: April 1, 2013

Rex and Ruth Maughan
Maughan Revocable Trust of 2007
% Don Glasgow
PO Box 970
Yarnell, AZ 85362

Dear Don,

This document serves as your 2013 Annual Operating Instructions (AOI) for the Apache Maid Allotment. This AOI is part of your Term Grazing Permit as provided for in Part 2, section 8(a).

I. AUTHORIZED LIVESTOCK NUMBERS/PERIOD OF USE/APPROVED NON-USE

Your 2013 Authorized Use Request has been approved and you are authorized the following Livestock Numbers and Periods of Use:

500 Adult Cattle (cow/calf)	3/1/13-6/4/13
60 Bulls	3/1/13-6/4/13
10 Horses	3/1/13-5/15/13

II. GRAZING SCHEDULE

The Annual number of livestock and dates are considered approximate. The actual dates and numbers may change due to many variables. Annual stocking level (annual authorized livestock numbers and dates) is determined based on current and expected forage production; livestock numbers can/should be adjusted if conditions change (either up or down; but not in excess of the permitted numbers).

To aide in determining the initial livestock numbers the Standard Precipitation Index (SPI) and the US Drought Monitor Report was discussed. The SPI shows our area as Normal and the US Drought Monitor showed our area in a Moderate drought. It was agreed that due to the above factors as well as that with the current precipitation conditions and the fact that there was abundant forage left over at the end of the growing season the livestock numbers would remain the same as last grazing year (560) unless the allotment continues further into a negative drought status.

It was agreed that to provide a more accurate number of livestock and use period dates that two AOI meetings would be scheduled. The grazing schedule addressed in this AOI is from 3/1/13 through 6/4/13, another AOI meeting would be scheduled in May and again in late August/early September to determine the dates and numbers for the remaining grazing year.

The following is the planned grazing sequence for the 2013 grazing season:

PASTURE NAME	PLANNED GRAZE PERIOD	LIVESTOCK NUMBERS
Middle Verde	3/1/13-3/15/13	500 C
Beaverhead Flat East	3/12/13-3/16/13	60 B
Cornville	3/16/13-4/8/13	500 C/60 B
House Mt./Beaverhead Flat West	4/9/13-5/11/13	500 C/60 B
Horse (Winter)	5/12/13	500 C/60 B
Beaverhead Flat East	5/14/13-5/20/13	500 C/60 B
Winter North	5/21/13-6/4/13	500 C/60 B
HORSES		
Winter Headquarters	3/1/13-5/15/13	10

Rested (Ungrazed) Pastures for the 2013 Grazing Season

White Hills

Changes from the grazing schedule will be made only with Forest Service approval. The planned use period in a pasture may be shortened or lengthened depending on forage availability and utilization in key areas. Livestock pasture moves will be completed within a five (5) day period, where feasible, and livestock will be actively herded from one pasture to the other. Once a pasture move occurs, cattle are not authorized to graze outside the newly occupied pasture. In the event cattle escape the assigned pasture (i.e. pasture gates left open, cattleguards become filled, cut fences, etc.), the permittee will return the cattle to the correct pasture in a timely manner. Preventing livestock from grazing adjacent allotments, your allotment's rested pastures, or from re-grazing previously used pastures is the permittee's responsibility.

III. DROUGHT MANAGEMENT

Drought is an inevitable occurrence in the southwestern United States. Both the Forest Service and grazing permittees must plan for drought as a normal part of management. During periods of drought, the following management actions may be necessary:

- Stocking levels may need to be reduced. Reductions may be necessary prior to the permitted season of use and/or during the permitted season of use.
- Season of use may need to be shortened. Depending on the severity of the drought and the stocking level, a reduced grazing season may be necessary.
- Pasture use periods may need to be shortened. Pastures will not be regrazed during the same grazing season and this may ultimately result in an early exit from the allotment.

- Utilization and/or seasonal utilization (grazing intensity) standards may need to be reduced. Depending on the severity of the drought and the stocking level, reduced utilization standards will likely result in shortened pasture use periods and may ultimately result in an early exit from the allotment.

• Lack of livestock water, or poor distribution of livestock water, may result in reduced pasture/allotment use periods. Depending on forage conditions, this effect may be mitigated by hauling water to temporary livestock watering facilities.

Allotment Management Plan direction for pastures requiring rest or deferment will be followed. Livestock use of planned rested pastures due to drought will not be authorized.

IV. GRAZING STRATEGY

Permitted livestock (cow/calf/heifer/bull) will be run together as a single herd until the bulls are removed from the cow herd. Annually, spring branding and culling occurs in early June; with fall culling and shipping of stock to market taking place in late September or early October, followed by the year's final culling and shipping in the last week of January.

The management of livestock pasture moves will continue to be based upon a forage plant phenology scheme of management. During the winter when most forage plants are dormant, livestock grazing periods will be longer, but will not exceed 45 days. In contrast, during the spring/summer active growth periods for forage plants, livestock use will be shortened to approximately 15 to 30 days per pasture.

V. RESOURCE MONITORING

Allowable Grazing Intensity & Utilization Guidelines

Grazing Intensity

Grazing intensity is defined as the amount of herbage removed through grazing or trampling during the grazing period. Grazing intensity would be managed to allow for the physiological needs of plants. This may result in earlier pasture moves than indicated in the Grazing Schedule (section II).

Generally, grazing intensity would be managed at; light levels (0-30%) during the critical growth period of plants. Moderate levels (40-50%) in the early summer months when sufficient opportunity exists for plant re-growth, Conservative levels (30-40%) during mid/late summer to the dormant period when the potential for plant re-growth is limited. Moderate levels (40-50%) in the dormant months when the plants are less vulnerable to grazing.

The length of the actual grazing period in each pasture will be determined by the allowable intensity established for the allotment; as a result, the planned use period in a pasture may be lengthened or shortened depending on forage intensity in key areas.

Forage Utilization

Utilization monitoring would occur at the end of the growing season within each of the main grazing pastures. Utilization is defined as the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). It is a comparison of the amount of herbage left compared with the amount of herbage produced during the year. Utilization is measured at the end of the growing season when the total annual production can be accounted for and the effects of grazing in the whole management unit can be assessed. Forage utilization within each pasture will be monitored and the allowable utilization standards (section IV) will be strictly enforced.

Numerous key areas for forage utilization monitoring have been identified for the Fossil Creek allotment. Key areas are defined as, "...a portion of range, which because of its location, grazing or browsing value, and/or use, serve as an indicative sample of range conditions, trend, or degree of use seasonally. A key area guides the general management of the entire area of which it is a part." Key areas will generally have the following characteristics: they will be approximately 20 to 500 acres in size; they will be located on productive soils with slopes less than 15%; they will have a plant community that is representative of the larger area; and they will generally be located 0.25 to 1.0 miles away from livestock water sources.

The location of key areas for forage utilization monitoring, key vegetation species, and the specific application to your allotment should be discussed with your Rangeland Management Specialist. Permittee participation in utilization monitoring is encouraged.

Upland areas:

The allotment's maximum allowable utilization in upland, non-riparian areas is 50%. This allowable use level is the utilization level permitted by both livestock and wildlife. If use levels in key areas exceed the maximum allowable utilization level before livestock enter a pasture, the pasture will not be used.

Riparian Areas:

Many of the allotment's riparian areas have been partially fenced to control livestock grazing use. These very important and diverse habitat areas will be closely monitored to insure that the proper allowable use is not exceeded. To comply with the Forest Land Management Plan, the District will coordinate with you to improve and maintain riparian vegetative communities by promoting three age classes of woody vegetation. A maximum allowable utilization level of 20% on woody species is acceptable if all three classes of riparian vegetation are present. If the mid-age class is absent, the maximum allowable utilization level on woody species will be limited to 5%.

Forage utilization within each pasture will be closely monitored and the forage utilization standards will be strictly enforced. This may result in earlier pasture moves than indicated in the Grazing Schedule (section II). The location of key areas for forage utilization monitoring, key vegetation species, and the specific application to your allotment should be discussed with your rangeland management specialist.

Permittee Monitoring

The permittee will document the following items on the enclosed Actual Use Form during the 2013 grazing year: 1) Actual Grazing Period; 2) Actual Livestock Numbers.

The permittee is encouraged to participate in Intensity and Utilization Monitoring. **It is very important that this monitoring be completed during the timeframes specified, and that the Actual Use Form is submitted to your Rangeland Management Specialist at the end of the 2013 grazing year.**

VI. MITIGATION MEASURES FOR SPECIAL STATUS SPECIES

Attached are two (2) grazing mitigation documents that include grazing mitigation measures for the Mexican spotted owl and the Chiricahua leopard frog. Please review and familiarize yourself with these required grazing measures; Forest Service personnel will field check your compliance with these mitigation requirements.

VII. RANGE IMPROVEMENTS

Structural Range Improvements

New Fence projects will be implemented only with prior approval and after a successful completion /clearance of both biological and archeological surveys from Forest Service personnel.

Range Improvement Maintenance

Range improvements assigned to you for maintenance have been identified in red on the permit maps of your term grazing permit. These improvements are to be fully maintained annually to comply with permit requirements (Part 2, section 8i). Any maintenance you perform must conform to the standards specified by your District Rangeland Management Specialist. The grazing permittee is responsible for all maintenance materials, supplies and equipment necessary to properly maintain all range structural improvements. The Forest will replace range structural improvement materials and/or supplies at the end of the improvement's life; when maintenance and repair is no longer feasible to keep the improvement properly maintained and functioning. **Please note that you must notify the District Rangeland Management specialist at least 60 days prior to beginning any maintenance work that requires the use of heavy equipment (ex. Maintenance of earthen stock tanks). Please also note the updated leopard frog mitigation (for tank cleaning) letter toward the end of this document.**

** Bull Pasture fence will be maintained this grazing year.

VIII. SALTING AND PROTEIN BLOCK PRACTICES

Proper salt and protein block location can be a good tool to aid in livestock distribution and they will be used in a manner to spread livestock utilization throughout the pasture. A detailed description of the Coconino National Forest Salting and Supplemental Feeding policy can be found in Part 3 of your term grazing permit; however, the following guidelines are provided as a general reference:

1. In general, salt and protein blocks should not be placed within ¼ mile of water, roads, or trails.
2. Salt and protein blocks will not be placed in areas of depleted range, erosive soils, or sensitive plant or animal species.
3. No more than three blocks (50 lb. blocks) of salt/protein will be placed at any location at any one time.
4. Salt/protein will not be placed at the same location twice during the same grazing season.
5. The use of portable salt/protein block containers is encouraged but not mandatory.
6. All salt/protein blocks as well as containers/tubs will be removed from the pasture when the livestock are moved.

The above listed guidelines will be used in conjunction with the salting mitigation measures listed in Section VI, Mitigation Measures for Special Status Species.

IX. PORTABLE WATER HAULING

Temporary sites for portable haul water may be needed and should be used as necessary to assist in livestock distribution. The following requirements will apply to portable haul water locations:

Archeological and Biological Clearances must be completed prior to placing portable waters.

7. Coordinate with the District Rangeland Management Specialist to identify portable water haul locations for individual pastures prior to the grazing period.
8. To aid in livestock distribution, the portable water haul locations should generally be in areas of light forage utilization.
9. Generally, portable water haul locations will not be located at sites used in previous years.
10. Portable water hauls will not be located in areas of depleted range, erosive soils, or sensitive plant or animal species.
11. Portable water haul locations will be moved when the desired forage utilization levels have been reached.
12. Portable haul water storage tanks and troughs will be removed when livestock leave the pasture.

X. FIRE

Please use caution during all ranch activities that could potentially start a fire. All ranch vehicles must be equipped with an axe, shovel, and water bucket. All open camp and branding fires require a ten foot fire ring cleared down to mineral soil.

During periods of critical fire danger the Forest Supervisor may declare a Red Flag Alert or issue other special orders. Under these conditions, the building or use of fires, the use of power saws, heavy equipment, ATV's and other motorized equipment may be prohibited on Forest Service land. All Federal, State and Local fire restrictions and regulations must be observed.

Report all fires to the Ranger District Offices at: Red Rock (928-282-4119), Happy Jack (928-477-2172), Mogollon Rim (928-477-2255); or to the Coconino National Forest Fire Dispatch Office (928-526-0600). Cooperation in the reporting, prevention, and suppression of fires will be expected as specified in Part 2, section 10 of your Term Grazing Permit.

XI. MOTOR VEHICLE RESTRICTIONS

On May 1, 2012, the Coconino National Forest began implementation of the Travel Management Rule. The Travel Management Rule requires the designation of roads, trails, and areas open to motor vehicle use and these routes are identified on the Motor Vehicle Use Map. Implementation of the Travel Management Rule requires active management of all motorized use, including use related to permitted grazing activities. Motorized travel off the designated road system, including off-road access, by grazing permit holders will be based on the need to carry out required management practices necessary to comply with the terms and conditions of the Term Grazing Permit. Examples of required management practices include, but are not limited to: the repair and maintenance of structural range improvements; transport and placement of mineral and protein supplement; herding of livestock; and tending to sick or injured animals. Legitimate motorized use off the designated road system, including off-road access, for conducting activities required under the Term Grazing Permit will be authorized as follows:

1. **For motorized use with ATVs, UTVs, motorcycles, and full-size pickup or smaller vehicles (curb weight less than 8,000 pounds):** Grazing permittee must obtain a grazing allotment specific Restricted Road, Trail and Off-Road Administrative Use Permit. Motorized vehicle use off the designated road system will be limited to only that use which absolutely necessary for compliance with the terms and conditions of the Term Grazing Permit.

2. **For motorized use with larger vehicles (curb weight greater than 8,000 pounds or larger than a full-size pickup) or any heavy equipment:** Grazing permittee must obtain a site specific Restricted Road, Trail and Off-Road Administrative Use Permit. Motorized vehicle use off the designated road system will be limited to only that use which absolutely necessary for compliance with the terms and conditions of the Term Grazing Permit.
   To request site specific Restricted Road, Trail and Off-Road Administrative Use Permit, the grazing permittee must provide their Rangeland Management Specialist with the project details a minimum of 30 days prior to the proposed starting date for the permit.

3. A copy of the approved Restricted Road, Trail and Off-Road Administrative Use Permit must be with the vehicle operator while operating the vehicle off the designated road system.
4. A Permit Placard must be attached to all permitted vehicles while operating off the designated road system.

5. Off-Highway vehicles (ATVs, UTVs, and motorcycles) used for conducting activities required under the Term Grazing Permit must be licensed and permitted in accordance with Arizona State law.

6. The Motor Vehicle Use Map for the Coconino National Forest identifies certain roads as "Roads Open to Highway Legal Vehicles Only". These roads are open only to motor vehicles licensed under State law for general operation on all public roads within the state. Grazing permittees operating motor vehicles on these roads must comply with the legal

requirements. Operating a motor vehicle off the designated road system to avoid the legal requirements of "Roads Open to Highway Legal Vehicles Only" is not permitted.

7. Grazing permittees will utilize motorized vehicles off the designated road system in a manner that will not result in damage to soil, watershed, vegetation, wildlife, heritage, or other forest resources.

8. Failure to comply with the conditions of the Restricted Road, Trail and Off-Road Administrative Use Permit may result in the immediate cancellation of the Restricted Road, Trail and Off-Road Administrative Use Permit and the issuance of a Notice of Non-Compliance for violation of the terms and conditions of your Term Grazing Permit.

   Grazing permittees that do not obtain a Restricted Road, Trail and Off-Road Administrative Use Permit are required to operate motorized vehicles only on the designated road system. Operating a motorized vehicle off the designated road system without a valid Restricted Road, Trail and Off-Road Administrative Use Permit will result in the immediate issuance of a Notice of Non-Compliance for violating the terms and conditions of your Term Grazing Permit (Part 2, Section 8a). A Notice of Non-Compliance may result in Term Grazing Permit suspension or cancellation proceedings.

If you have any questions or wish to discuss anything further, please feel free to contact Marc Stavropoulos at (928) 203-7515.

Sincerely,

/s/ Heather C. Provencio
HEATHER C. PROVENCIO
District Ranger

Grazing Allotment Annual Operating Mitigation Instructions for Mexican Spotted Owl

The following mitigation measures would apply for Apache Maid Allotment.

The purpose of the mitigation measures is to improve and protect habitat for prey species such as birds and small mammals in sensitive areas, and to protect nesting birds from disturbance associated with gathering or construction activities. Thank you for your cooperation.

1. Follow these guidelines to meet the intent of the grazing guidelines listed in the Mexican Spotted Owl Recovery Plan:

   A. Continue to monitor grazing use by livestock and wildlife in "key grazing" areas such as riparian areas (MA12), meadows (MA9), pine/oak types (MA3), and aspen (MA5). If cattle show an increasing utilization trend, then change management strategies to reduce the trend. If wild ungulates show an increasing utilization trend, the Forest Service will work with the Game and Fish Department to reduce this trend.

   B. Continue to implement and enforce grazing utilization standards to attain good to excellent range conditions in "key areas" over time.

   C. Continue to restore good conditions to degraded riparian communities by maintaining or promoting three age classes in woody vegetation. If the mid-age class is absent, 5% utilization or less is required to promote three structural stages. If all three classes are present, utilization of 20% or less of woody vegetation is acceptable.

2. To reduce animal concentrations and trampling of vegetation which may impact prey species forage and cover, follow these guidelines for placing salt, mineral blocks or food supplements.

   A. Do not place these items in riparian areas, mountain meadows, or non-riparian drainages in ponderosa pine unless being used for a watershed restoration project.

   B. Do not place these items in spotted owl habitat or near peregrine falcon nesting areas. The attached map shows areas (shown as mitigation) where salt, supplemental feeding, or mineral blocks should not occur.

   C. Rotate salt and mineral supplement sites regularly.

3. To eliminate potentially disturbing activities in spotted owl habitat or near peregrine nesting areas during their breeding season, do not allow the following types of activities in areas displayed in red on the map between March 1 and August 31 without prior consultation with the District Range Staff.

   A. Spring branding or fall gathering.

   B. Construction activities such as; new construction of fences, corrals, or buildings, or cleaning or construction of tanks.

Mitigation for Leopard Frogs

General Activities:

Please refer to the document "Hygiene Protocol For Control of Disease and Aquatic Organism Transmission" for specific prevention and equipment cleaning guidelines to prevent the spread of aquatic invasive nuisance species and pathogens.

Prior to Tank Maintenance:

At least 60 days prior to maintaining or cleaning out livestock tanks the permittee shall inform the Coconino of planned activities. The permittee is responsible for submitting a proposal that details when the work is to be completed, who and contact information for who will be conducting the work, details about what work is to be completed, and a list of all equipment that will be used.

Authorized personnel shall assess and evaluate the need to survey the tank for leopard frogs. If Chiricahua leopard frogs are known to occur or found during surveys, the Forest and permittee shall work with the U.S. Fish and Wildlife Service (USFWS) to develop and implement a plan to minimize take of frogs. Plans to minimize take shall be approved by the USFWS. If other leopard frog species are found, a plan to minimize impacts will be developed and implemented. Measures to minimize take should include salvage and temporary holding of frogs, limiting disturbance and work areas to the minimum area practicable, leaving stands of emergent vegetation in place, and/or measures to minimize the likelihood of disease transmission.

All ranch hands, construction personnel, and others implementing the maintenance shall be given a copy of these terms and conditions, and informed of the need to comply with them. These instructions will be given to workers carrying out the maintenance in advance so that the appropriate equipment (screens for pump tanks, off-site water, disinfecting solution and sprayer, etc.) can be secured and brought out to the site.

<u>During Tank Maintenance:</u>

For tanks occupied by frogs (including those dry tanks that could have frogs persisting in moist cracks in the tank bottom or along the tank berms) it is required that a representative from one of the agencies (USFWS, Forest Service, or Game and Fish) be present to monitor tank cleaning or repair efforts.

Live fish, crayfish, bullfrogs, leopard frogs, salamanders, or other aquatic organisms shall not be moved among livestock tanks or other aquatic sites.

If a site is identified as occupied by leopard frogs, water shall not be hauled to the site from another aquatic site or tank that supports leopard frogs, bullfrogs, crayfish, or fish. When water is needed, such as for bentonite application, all precautions shall be taken (use of fish screens of 1/8 inch or smaller mesh and adding bleach if water is used from another tank or municipal water

source) to ensure that fish, bullfrogs, and their tadpoles, and crayfish are not moved among tanks.

For situations that require water to be pumped from a tank with frogs, the following mitigations apply:
Use of tank water will be judicial and if the water level is low, it may be required that water be hauled in.
Mesh filters of 1/8inch will be used to avoid sucking up eggs, tadpoles or juvenile frogs.

Pumps will be placed as far away from the water as possible. Pumps will be moved during refueling in order to avoid contaminating the tank water and vegetation immediately around the tank.

Hygiene Protocol
For Control of Disease and Aquatic Organism Transmission

Executive Order 13112 (February 3, 1999) directs all Federal agencies to ensure that their actions do not promote the introduction or spread of invasive species. Please comply with the following prevention and equipment cleaning guidelines to prevent the spread of aquatic invasive plants and animals as well as diseases.

This protocol is to be implemented when: 1) employees, contractors, permittees, or outfitter/guides will be working between different bodies of water before equipment has had 5 days to dry thoroughly; and/or 2) after entering bat roosts or handling bats. In these cases, it is required that all gear/equipment be properly treated using either a 10% bleach solution, an acceptable hospital-grade fungicide/virucide, or 70% isopropyl. Following are examples of equipment that would need to be treated before reusing at another site.

Examples of equipment used at aquatic sites:

- Waders or shoes/boots
- Pygmy meters, weirs, flumes, tape measures and other hydrologic instruments
- Dip nets, seines, traps, nets and other aquatic sampling gear
- Fire engines, pumps, drafting hoses, helicopter dip buckets, and other fire-fighting equipment
- Backhoes, frontend loaders, bobcats, and other equipment used to clean/fix earthen tanks.

Examples of equipment used in bat roosts or when monitoring bats:

- Spelunking equipment
- Rulers, calipers, headlamps, gloves, bat bags
- Mist nets, mist net poles, stakes, and guy wires

Procedure:

1) **Inspect** - Before leaving site, inspect all gear for mud, vegetation, and aquatic organisms
2) **Clean-** Wash, in site water, as much of the mud/dirt on equipment and gear and remove any vegetation or detritus attached to gear by shaking, rinsing in water and hand picking.

3) **Disinfect -** *Complete all sterilizing well away from streams or ponds.* Cleaning solutions fall in these categories: hospital-grade fungicide/virucide (eg. Quat 128 or Sparquat 256), 10% bleach/water solution, 70% isopropyl alcohol, and drying equipment for a minimum of 5 days. Note that if using a bleach solution, do not store the solution for more than 24 hours as the bleach will begin to break down once it is diluted.

If equipment is coated in thick mud, follow these instructions:

- Fill a large container (bucket, ice chest, rubber tub, etc.) with clear water (from pond or spigot).
- Mix the appropriate amount of disinfectant with the needed amount of water (see following table).

Volume of Water	Volume of Bleach	Volume of Quat 128	Volume of Sparquat 256
100 mL	10.4 mL or 0.35 oz.	4.62 mL or 0.16 oz.	3.00 mL or 0.1 oz.
1 liter	104 mL or 3.5 oz. or 7.0 Tbsps.	46.2 mL or 1.6 oz. or 3.1 Tbsps.	30.0 mL or 1.0 oz., or 2.0 Tbsps.
1 gallon	400 mL or 13.5 oz. or 27 Tbsps. or 1.7 cups	6.35 liquid oz. or 12.7 Tbsps. or 0.79 cups	4.12 liquid oz. or 8.2 Tbsps. or 0.51 cups

- Stir to mix with brush.
- Clean off any remaining vegetation or mud with brush that may have been missed earlier.
- Dip and rotate equipment in solution, shake off, open and lay out in sun/wind to dry
- Dip shoes/waders in solution and scrub with a brush, shake off and let dry in sun.
- Don't forget to sterilize brushes in solution.

If equipment is wet but clean of mud and vegetation, follow these instructions:

Instead of making a solution to dip equipment in, fill a spray bottle with same solution concentration and spray down equipment.

For vehicles and heavy equipment, follow these instructions for disinfecting:

If possible, power wash with clean hot water (>140F).
Make the appropriate amount of disinfecting solution needed:

Volume of Water	Volume of Quat 128	Volume of Sparquat 256
100 mL	4.62 mL or 0.16 oz.	3.00 mL or 0.1 oz.
1000 mL	46.2 mL or 1.6 oz. or 3.1 Tbsps.	30.0 mL or 1.0 oz., or 2.0 Tbsps.
1 gallon	6.35 liquid oz. or 12.7 Tbsps. or 0.79 cups	4.12 liquid oz. or 8.2 Tbsps. or 0.51 cups

100 gallons	4.96 gallons	3.22 gallons
1000 gallons	49.6 gallons	32.2 gallons

Tanks, hoses, pumps, buckets and other equipment that comes into contact with raw water should be sanitized with 5% cleaning solution (Quad 128, or Sparquat 256). Set up a portable disinfection tank using 5% cleaning solution of Quat 128 or Sparquat 256.

For engines and tenders, empty the tank then circulate the 5% solution for 10 minutes. Float portable pumps in the disinfection tank and pump cleaning solution through for 10 minutes. Pump cleaning solution through hose, then rinse with water. Discard cleaning solution back into the disinfection tank for re-use.

Dip gear or equipment (e.g. helicopter buckets) into the cleaning solution. Or, put the 5% cleaning solution in backpack spray pumps to clean portable tanks, helicopter buckets, and other equipment. The solution must be in contact with the surface being sanitized for at least 10 minutes and then rinsed with water.

Other Important Information

Sometimes it's possible and prudent to save remaining disinfecting solution in a sealable container for later use, but only if solution doesn't have too much suspended solids.

If solution must be discarded, dispose of on asphalt, cement or hard roadbed, well away from and not connect to any water bodies.

If at all possible, allow all gear and equipment to dry completely before reuse at next site.

Note that the same procedures are required for anyone entering bat roosts or handling bats. This is to prevent the introduction and spread of White Nose Syndrome.

Quat 128 and Sparquat 256 are available from GSA and local janitorial and swimming pool chemical suppliers.

Actual Use Monitoring Form

Allotment Name: Apache Maid Year: 2013 (3/1/2013 to 6/4/2013)

Pasture Name	*Actual Graze Period	*Actual Livestock Numbers	AUMs Used
Middle Verde			
Beaverhead Flat East			
Cornville			
House Mt./Beaverhead Flat West			
Horse (Winter)			
Beaverhead Flat East			
Winter North			

- Permittee Fill in Sections with an *.